

An overview of the Greenhouse Gas Protocol Scope 2 Guidance Consultation

1. Introduction

The Greenhouse Gas Protocol (“GHG Protocol”) is the standard for greenhouse gas accounting and reporting used by most Fortune 500 companies and members of RE100. A public consultation concerning revisions to the GHG Protocol Scope 2 Guidance (“Scope 2 Guidance”) is ongoing and is scheduled to end on 19 December 2025. The GHG Protocol aims to publish the updated Scope 2 Guidance in late 2027, with implementation expected to phase in over a subsequent period.

“Scope 2 emissions” are indirect greenhouse gases resulting from the purchase and consumption of electricity, steam, heat or cooling by a company. The Scope 2 Guidance underpins major reporting frameworks, including the EU’s Corporate Sustainability Reporting Directive, and shapes market practice for purchasing decisions and routes to market within the voluntary clean energy market. As explained in our earlier [article](#), reforms to Scope 2 reporting could stimulate 24/7 carbon-free electricity (“CFE”) procurement.

Under the Scope 2 Guidance, the selection of the Market-Based Method (“MBM”) and the Location-Based Method (“LBM”) reporting is determined by the characteristics of the electricity markets where a company operates. Companies operating in markets, such as the EU, where contractual instruments (including direct contracts, certificates or supplier-specific information) are available must use both MBM and LBM (dual reporting), while those exclusively in markets that don’t provide product or supplier-specific data use the LBM.

The GHG Protocol’s proposals align Scope 2 accounting and reporting with real-time power market dynamics, specifically how supply and demand are settled on an hourly basis (or less) within defined market boundaries. This article analyses the proposed Scope 2 Guidance and explains how the proposed changes could encourage 24/7 CFE procurement and incentivise hybrid (renewables plus storage) power purchase agreements (“PPAs”) to meet decarbonisation goals.



2. Proposed Revisions To The Market Method

The proposed revisions to the MBM introduce requirements for hourly matching and deliverability. To ensure credibility, contractual instruments would align the time of electricity generation with the time of its consumption. This temporal alignment is proposed because a company’s total yearly Scope 2 emissions can vary significantly depending on whether they are calculated using hourly or annual matching. The proposal for “hourly matching” requires that contractual instruments, such as PPAs and Guarantees of Origin, be matched to consumption on an hourly basis.

Exemptions to this requirement may be provided for companies that meet specific eligibility thresholds, such as those based on the volume of annual electricity consumption, the level of which is open to feedback, or company size (e.g. small and medium companies). To make hourly matching feasible, the implementation is anticipated to involve a multi-year rollout. Further, companies without access to actual hourly data would be permitted to use load profiles to approximate their hourly power usage. However, if a company is exempted from hourly matching, it would still need to comply with the proposed deliverability requirements.

Grid-level energy storage can facilitate hourly matching by converting variable renewable energy into dispatchable power. Hourly matching directly incentivises advanced solutions like energy storage. This flexibility allows companies to align generation with consumption on an hourly basis, positioning hybrid PPAs as a key mechanism for meeting 24/7 CFE goals. It is critical that any regulatory barriers to uptake of hybrid PPAs are removed.

For example, issuing bodies for domestic energy attribute certificate schemes, such as Guarantees of Origin, will need to time-stamp production and oversee the certification process for electricity that has passed through energy storage systems to enable compliance with the Scope 2 Guidance.

The “deliverability” principle specifies that claims must originate from resources within the same grid as the consumption point or a directly interconnected grid capable of physical delivery. In other words, contractual instruments must be sourced from a generation facility deemed deliverable to the consuming load. For companies with demand in an electricity market utilising a zonal pricing structure, the market’s defined zonal pricing boundaries would serve as a method to demonstrate deliverability.

Accordingly, ENTSO-E’s bidding zones would be used for consumption within Europe, including any interconnected offshore bidding zone. In addition to the bidding zones, in certain circumstances, the reporting company may also claim power from an adjacent and directly connected market and consumption of power from an interconnected transmission system.

An overview of the Greenhouse Gas Protocol Scope 2 Guidance Consultation

A residual mix emission factor is a default value used to account for electricity consumption that is not covered by specific contractual instruments. A proposed update to the definition of residual mix emission factors seeks to reduce the risk of double counting by clarifying that residual mix should exclude generation already allocated through voluntary claims or standard supply services such as those provided by a default utility.

Under the proposed revisions, the option to use a grid-average emission factor (e.g. the location-based average emission factor) is also removed. For electricity consumption not covered by voluntary claims or standard supply services, reporting entities would apply a residual mix emission factor that excludes all claimed and standard supply contractual instruments. Alternatively, if no residual mix factor is available, a fossil-based emission factor must be used, which may include a fossil-only grid average or a default factor for gas, oil or coal. These updates aim to avoid double counting between reporting companies.



A legacy clause is under consideration to allow existing contractual instruments to count toward Scope 2 MBM reporting even if they don't meet new hourly matching and deliverability requirements. This approach seeks to provide continuity and maintain market confidence for companies that made substantial financial and operational commitments under the 2015 Scope 2 Guidance. Stakeholders are asked for feedback on the cut-off date for eligibility, specifically whether a contract must have been signed prior to the Scope 2 Guidance's publication date or its subsequent implementation date. To ensure the integrity of a legacy clause upon its adoption, feedback on design parameters is sought, including the eligible types of instruments (e.g. PPAs, unbundled certificates) and their minimum contract length.

3. Proposed Revisions To The Location-Based Method

The LBM proposals introduce several key changes, including an updated hierarchy for emission factors, a mandate to use the most precise emission factors available, and a redefined standard for "accessible data". There is a clear focus on providing a clear decision path for selecting emission factors.

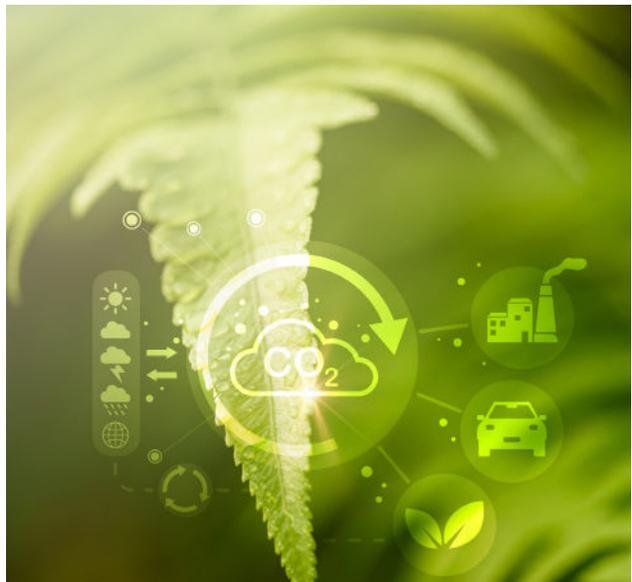
The key changes are the proposed emission factor hierarchy that establishes a framework for calculating indirect emissions by prioritising factors based on their precision.

This methodology establishes that companies are to first use the most granular spatial boundary available, such as a local boundary, followed by the most precise temporal granularity, such as hourly data. The hierarchy establishes a preference for consumption-based factors over production-based factors. This approach is intended to accurately reflect grid operations.

A key update is also the requirement for companies to use the most precise location-based emission factors accessible to them, provided such factors are matched to the precision of their activity data. "Accessible emission factors" are defined as those that are publicly and freely available from a credible source.

4. Broader Implications For Clean Energy Procurement

The ongoing public consultation concerning revisions to the Scope 2 Guidance introduces a pivotal shift in Scope 2 emissions accounting, directly aligning it with real-time power market dynamics. Combined with the LBM proposals, which prioritise the use of the most granular spatial and temporal data available, these changes are designed to create a more robust and market-reflective framework for greenhouse gas accounting and clean energy procurement. The resulting framework can create financial incentives for energy technologies that are needed at scale, particularly storage, to significantly decarbonise the grid.



Contact Our Energy Group



Niall Donnelly
PARTNER
Energy Projects and Regulation

📞 +353 (0) 1 237 3700
✉️ ndonnelly@philiplee.ie
🌐 Niall Donnelly



Lev Gantly
PARTNER
Climate Projects

📞 +353 (0) 1 237 3700
✉️ lgantly@philiplee.ie
🌐 Lev Gantly



Max Bail
ASSOCIATE
Energy Projects and Regulation

📞 +353 (0) 1 237 3700
✉️ mbail@philiplee.ie
🌐 Max Bail